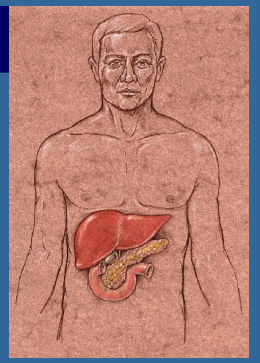
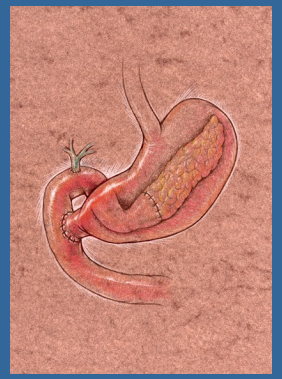


Patient Care Review

3 November 2000

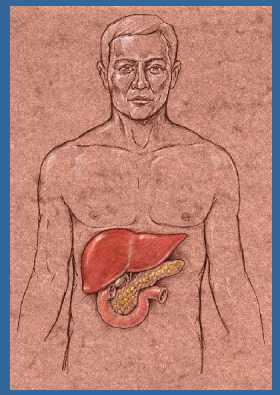
2LT Michael Trust, Dietetic Intern
Preceptor: CPT Christine Kaefer, RD
GI Rotation, MNT Basic

Objectives



- Discuss the GI-related condition and treatment of a WRAMC Patient with a
- Provide the etiology of the patient’s disease state
- Present the patient’s care plan provided by the MNT staff dietitians and intern

Patient Selection

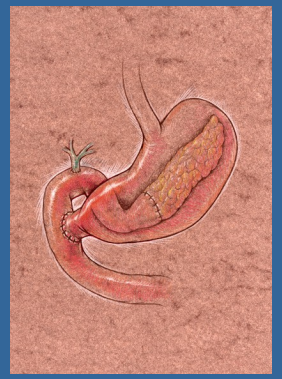


- Patient Identification: JR
- 30 y/o Hispanic female
- Date of Admission: 22 September 2000

Condition

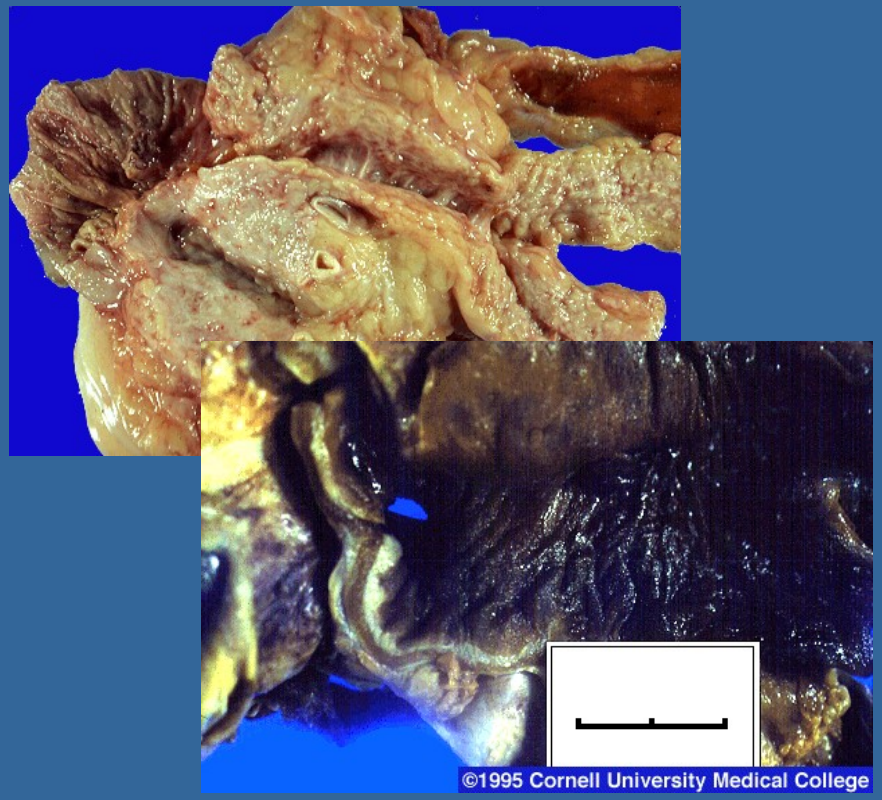
- Chief complaint: Nausea, vomiting, abdominal pain, twenty pound weight loss
- Diagnosis: Nonfunctional Neuroendocrine Carcinoma in Pancreas with metastatic tumors in the liver and lymph system
- WRAMC Medical Nutrition Therapy Care Plan:
  - Gastric Surgery (December 1998)
  - Malnourishment in Adults (August 1998)

Review of The Diagnosis: Definition

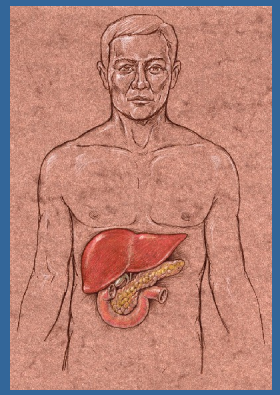


- Neuroendocrine: pertaining to the nervous and endocrine systems as an integrated functioning mechanism

- Carcinoma: a diverse group of tumors, such as carcinoid, islet cell tumors, neuroblastoma, and small-cell carcinomas of the lung



Etiology: Carcinoma of the Pancreas



- Number 4 leading cancer killer
- Increased in incidence over the past several decades
- More than 29,000 people in U.S. will die of pancreatic cancer this year
- By the time pancreatic cancer is diagnosed, it is usually to late for a promising outcome
- Four-fifths of all cases occur after the age of 60
- 30 % more common in men than in women
- 65 % more common in blacks than in whites

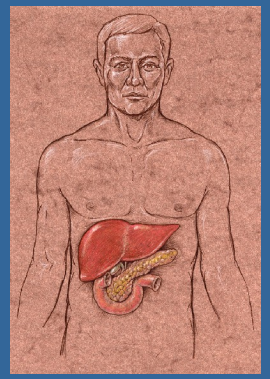
Etiology: Endocrine Cancer (Islet Cell)

- Endocrine carcinoma accounts for no more than 1,000 cases a year in the U.S.
- Tumor classifications:
  - functional (hormone-producing)
  - nonfunctional (unable to produce hormones)
- Most endocrine cell tumors are nonfunctional
- 90 % of nonfunctional tumors are malignant

Possible Causes of Pancreatic Cancers

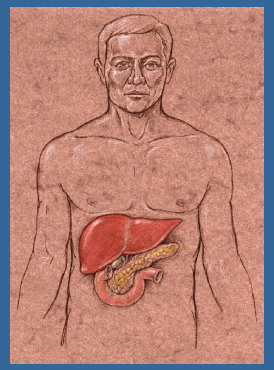
- Cigarette smoking
- Risk more than twice that for nonsmokers
- Limited evidence of familial predisposition – more frequently in endocrine than for exocrine tumors

Review of Diagnosis: Symptoms



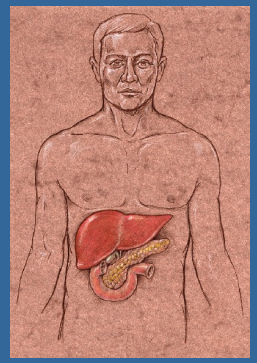
- vague discomfort for months, often ignored
- pain that gradually worsens – most severe at night
- rapid weight loss
- diarrhea, constipation, greasy stools
- Jaundice
  - when common bile duct is blocked by tumor, or when cancer spreads to liver
- sudden development of diabetes
  - when no family history or other causes exist)

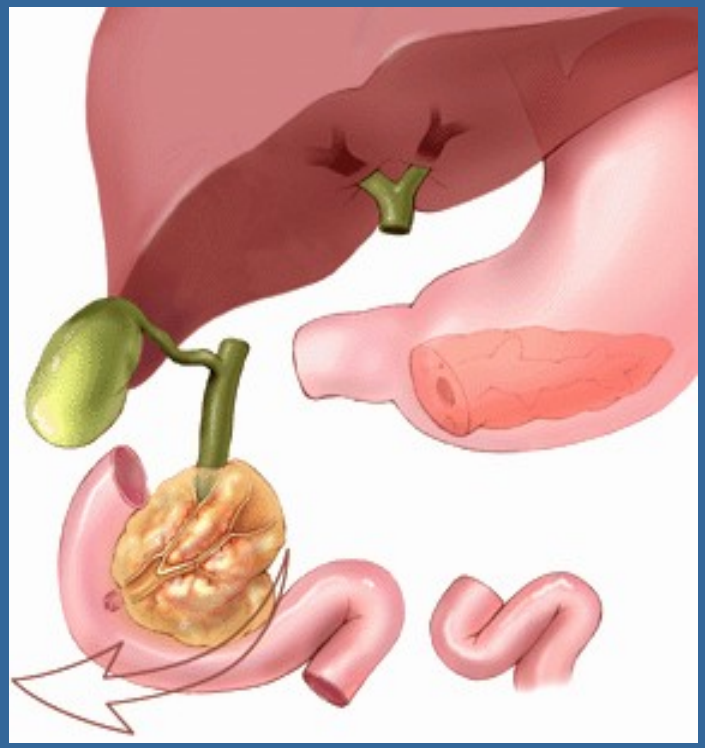
Physical Exam



Ht: 63 in Frame Size: large Adm Body Wt: 133# Usual Body Wt: 155#	How determined? Estimate How long ago? 2 months
Desirable Body Wt: 134-151 % DBW: 93 – 88 % % UBW: 86% BMI: 23.6	How determined? MHWT

Review of the Diagnosis: Treatment

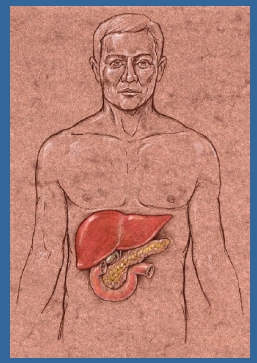


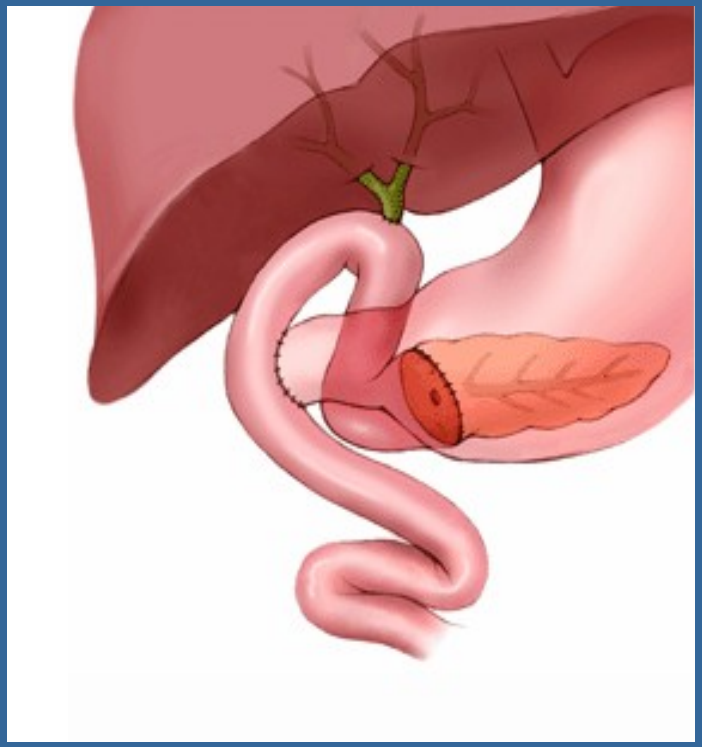


Whipple Procedure (pancreaticoduodenicectomy)

- Head and neck of the pancreas, the duodenum, and adjacent structures are removed
- This leaves enough tissue so that the pancreas can continue producing insulin, other hormones, and digestive enzymes

Review of the Diagnosis: Treatment





Whipple Procedure (pancreaticoduodenicectomy)

- Head and neck of the pancreas, the duodenum, and adjacent structures are removed
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Review of the Diagnosis: Treatment

Chemotherapy

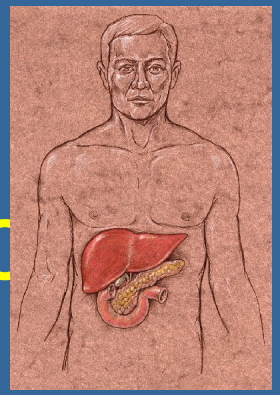
- Used when the cancer has spread or when surgery is either ineffective or impossible

- Streptozotocin:
  - reduced tumor size in up to 50 % of islet cell cancer
  - lengthened survival by a few months

Review of the Diagnosis: Prognosis

- The average life expectancy after being diagnosed with pancreatic cancer is 3 to 6 months
- 4% 5-year survival rate for all patients who seek treatment
- Endocrine pancreatic cancer often can be cured
- Endocrine tumors are slow growing, and the outlook is usually more favorable than for exocrine pancreatic cancer
- Due to metastasis of tumor, final prognosis very poor

Past Medical/Surgical Histo



- **June: Positive for H. Pylori, treated for Ulcer Ft. Drum**
- **August: Discovered pancreatic mass Ft. Bragg**
- **29 September: Whipple Procedure WRAMC**
- **8 October: Placement of hepatic drain**
- **23 October: Surgical exploration for GI bleeding**
  - **indicated by hemetemesis and hematochezia**
  - **left lobe liver abscess resection**
  - **gastric oversew at areas of bleeding**
- **24 October: bacteremia with positive cultures P. aeruginosa, T. glabrata, coag neg staph, Klebsiella**

Psycho-Social/Family Histo

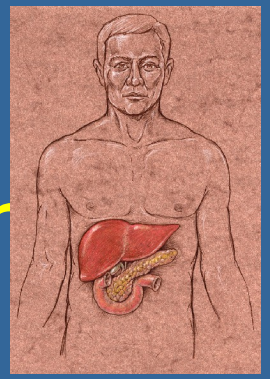
- Married to E-5 infantry soldier stationed at Ft. Benning
- Non-smoker/drinker
- Mother of 4 year old little boy
- Psychological analysis:
  - Adjustment disorder with mixed depression and anxiety
  - Partner relationship problems
  - Separated from home and family
  - “struggling with loss of control over her body”
  - “escalating tension in marital relationship … due to impact on careers & family life”

Patient's Medical Treatment

Invasive procedures:

- TPN 10 days PTA + 7 days at WRAMC prior to Whipple Procedure 29 Sep
- Hepatic drain placement 8 Oct, replaced 23 Oct
- Extubated on 23 Oct after exploratory GI surgery
- Jejunostemy Tube w/Whipple
- Gastrectomy Tube for release of distention and residues
- IV for abx regimen, and for fluid replacement of losses due to hepatic and gastric drainage

Patient's Medical Treatmer



Current Status

- S/P Whipple Procedure procedure for neuroendocrine tumor (POD #35)
- S/P surgical exploration for GI bleeding and multiple liver abscesses (POD #11)
- Advance to PO intake and reduce fluid retention
- Ongoing treatment for bacteremia
- Gastric emptying study (31 Oct) showed slowed but complete gastric emptying

Nutrition History – Diet Or

Date	Actual Diet Order	RD Recommendation
22 Sep – 30 Sep	TPN	Same (Ms. Smith)
1 Oct – 7 Oct	Impact x 24 hrs	Same (Ms. Smith)
8 Oct – 9 Oct	Impact x 24 hrs with Clear Liquid TID	Same (Ms. Smith)
10 Oct – 19 Oct	Post Gastrectomy Diet w/Ensure Pudding and Impact x 12 hrs	Post Gastrectomy w/ x 12 hrs Impact (CPT Kaefer)
20 Oct – 27 Oct	Osmolite x 24 hrs	
26 Oct – 27 Oct	Osmolite x 24 hrs w/Clear Liquid TID	Osmolite + Promod or
27 Oct – 29 Oct	Impact x 24 hrs with Clear Liquid TID	Impact x 24 (2LT Trust)

Medicatio h Nutritional Significance

Medication	Classification	Drug-Nutrient Interactions	Effects
Albuterol	Bronchodilator	Limit Caffeine	↑ glucose, nausea/vomiting
Insulin (human) 8u BID	Antidiabetic, Hypoglycemic		↓ glucose, ↓ K, ↓ Mg, ↓ P
Vancomycin (IV)	Antibiotic		↓ WBC, ↑ BUN, ↑ creatinine

Medicatio h Nutritional Significance

Medication	Classification	Drug-Nutrient Interactions	Effects
Aztreoman (IV)	Antibiotic		N/V, diarrhea, creatinine
Heparin Sodium (porcine)	Anticoagulant		abdominal pain, GI bleeding
Zosyn	Antibiotic (IV only)		nausea/vomiting Anorexia, K, Na

Medicatio h Nutritional Significance

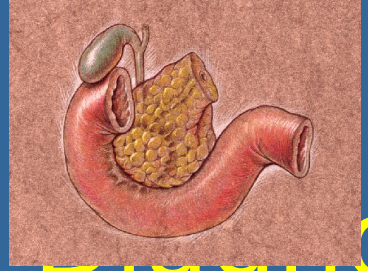
Medication	Classification	Drug-Nutrient Interactions	Effects
Amphotericin B (IV)	Antifungal, Antiprotozoal		Anorexia, ↓ wt., ↑ BUN, ↑ crea, ↓ K, ↓ Mg, ↓ Na, nausea/vomiting, stomach pain
Zofran (PRN)	Antiemetic		Abdominal pain, constipation
Pancreatic Lipase TID			

Medicatio h Nutritional Significance

Medication	Classification	Effects
Prilosec	Antisecretory, Antiulcer, AntiGERD	↓ Na, abdominal pain, diarrhea, ↑ creatinine, ↑ glu, ↓abs Fe, ↓ abs Vit B_{12}, ↑ bil,
Reglan	Antiemetic AntiGERD	Gastric emptying, nausea, diarrhea
KCl	Electrolyte, potassium suppl	Counter effects of K depletion
Bumex	Diuretic	Reduce fluid retention

Labs with Nutritional Significance

Date	Alb (3.5-5)	PreAlb (19-39)	Alk Phos (38-126)	AST (14-36)	ALT (9-52)	Glu (75-110)	K (3.6-5)	Remark
22 Sep	3.2		528	143	401	102	3.5	Low albumin due to nutrition status
30 Sep	2.6		297	1283	1396	99	3.8	LFT elevated due to developing abscess
15 Oct	1.9	7.8	217	36	43	155	3.9	Prealbumin indicate malnutrition
22 Oct	1.9		350	24	24	231	3.5	K low due to drainage and medications
31 Oct		8.2	160	14	21	83	3.0	LFT stabilizing, K still low
2 Nov	2.5	10.6	219	28	24	53	3.2	Albumin increasing, K suppl (1Nov)

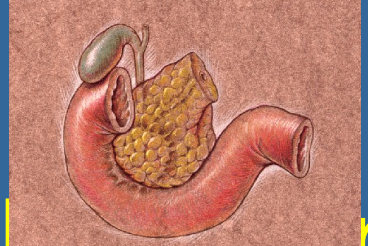


Nutrition Diagnostic Statement

- 26 Sep – Initial Assessment (Ms. Smith):

"Evidence of at least moderate malnutrition per 14% body wt loss over 3-4 m assoc with n/v and decreased PO intake."

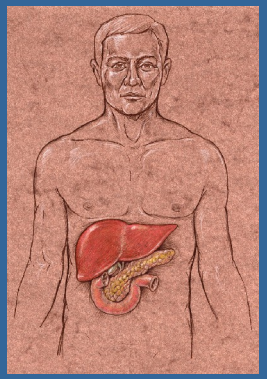
"Agree with TPN at this time. Low alb may be secondary to Dz, such as Ca, and some hemodilution, rather than the malnutrition per se."



Overall Nutrition Diagnostic Statement

- Patient presented challenges throughout treatment:
- Constantly at risk for further malnutrition:
  - increased need for wound healinh
  - GI bleeding, liver abscess, bacteremia, N/V, and diarrhea
- Difficult to assess lab results:
  - continuous IV hydration
  - medications
- Caloric/protein consumption and needs determined by intake and maintained by appropriate diet orders
- Currently she consumes <25% PO and is on 12 hrs TF

Goal of Therapy



- Prevent further malnourishment and promote wound healing by providing adequate kcals and protein
- Provide variety/selection menu options to Pt to increase intake and morale
- Transition Pt from tube feeds to total PO intake to meet all of nutrition needs
- Enable Pt to become strong enough for travel back to Ft. Drum to reunite with family and complete Chemotherapy

Follow Up Plans

- Continue monitoring consumption of calories and protein
- 24 – 72 hour caloric count vs. 24 hour TF
- Future Care Plan: Cancer/Chemotherapy (August 1998)

Outcomes of Care

Potential Health Outcomes:

- Eliminate infection and speed up recovery time
- Improve nutrition status to promote wound healing
- Extend life of the patient
- Improve quality of life for patient/reduce suffering

Outcomes of Care

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- Eliminate infection and speed up recovery time
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Potential Resources Saved:

- Reduce in-patient hospital days
- Conserve resources such as enteral formula/medication
- Free up healthcare labor
- Reduce financial cost to government

Summary

- Described the etiology of Pancreatic Carcinoma and the Whipple Procedure
- Present the patient’s care plan provided by the MNT Staff
- Explained the significance of the patient’s medications and the resulting lab values
- Determined the Outcomes of Care

Questions and Discussions